

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 70.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-004827**Date Inspected:** 26-Nov-2008**Project Name:** SAS Superstructure**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Contractor:** Japan Steel Works**OSM Arrival Time:** 830**OSM Departure Time:** 1700**Location:** Muroran, Japan**CWI Name:** Chung-Fu Kuan**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower, Jacking and Deviation Saddles**Summary of Items Observed:**

The following report is based on METS observations at Japan Steel Works (JSW) in Muroran Japan. Current work: Casting, machining and nondestructive testing of Saddles.

Fabrication Shop 4**T1-1 Base**

No work performed on this date.

T1-1 Casting

Four JSW employees were observed grinding the overlay weld areas of the rib and stem plates of T1-1 casting. The grinding was performed to smooth the weld joint surface and remove excess weld metal prior to fit up to T1-1 base. Work was not completed on this date and appears to meet the minimum requirements of the contract documents.

T1-2 Base

The QA inspector observed the in process welding of the structural steel plates for the Tower Saddle Base T1-2. Makoto Kato, ID 08-5018 continued the cover pass and reinforcing fillet welding of joint 8Y-10V (2-2), 8Y-7V (2-2) and 8Y-11V (2-3_ in the horizontal (2G) position. The welding was performed utilizing the shielded metal arc welding process per the welding procedure specification (WPS) SJ-3012-2. Intertek Testing Services Quality Control (QC) inspector Mr. Chung-Fu Kuan monitored the welding parameters and heat control at periodic intervals. The minimum preheat temperature of 110°Celsius and maximum interpass temperature of 260° Celsius

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were verified to meet the WPS requirements by Mr. Kuan and the QA inspector utilizing Tempilstik temperature indicators. This data was entered into the QC inspector's daily log, identifying the location on a weld map. The work was not completed on this date and appears to meet the minimum requirements of the welding procedure specification and contract documents.

T1-3 Base

The QA inspector observed the in process fit-up and welding of the structural steel plate temporary stiffeners for the Tower Saddle Base T1-3. The stiffeners were located on the exterior of the rib plates as shown in JSW approved fabrication procedure. The work was not completed on this date and appears to meet the minimum requirements of the welding procedure specification and contract documents.

W2-E1

The QA inspector observed JSW personnel begin to remove temporary bracing from W2-E1 base ribs in preparation for final machining. The bracing was removed using the oxygen-fuel gas method. The QA inspector noted that the final cut to bring the edges of the plates to required dimension was performed using an automated oxygen-fuel gas system. The work was not completed on this date and appears to meet the minimum requirements of the contract documents.

W2-E2 Base

No work performed on this date.

W2-W1 Casting

The QA inspector observed the Nikko Inspection Services QC/NDT technician Mr. Nuboro Takagi perform straight beam ultrasonic testing of the casting W2-W1 trough areas. The testing was performed with a 2 MHz 24mm round transducer in accordance with the JSW procedure specification number SJ-2878 revision 4. The testing was not completed on this date and the work appears to meet the minimum requirements of the contract specifications.

The QA inspector periodically observed the Nikko Inspection Services QC/NDT technician Mr. Harumi Kohama perform shear wave ultrasonic testing of casting W2-W1 trough areas where straight beam testing could not be confirmed due to loss of the back wall signal. The testing was performed with a 2 MHz, 20mm by 22mm 45 degree rectangular shear wave transducer. The testing was performed in accordance with JSW procedure specification number SJ-2878 revision 2. The testing was not completed on this date and the work appears to meet the minimum requirements of the contract specifications.

Foundry

W2-E2 Casting

No work performed on this date.

W2-E3 Casting

No work performed on this date.

A JSW employee was observed grinding areas where excess material has been removed from the exterior surface

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of the casting W2-W3. The grinding was performed to smooth the surface of the casting where the Air-Carbon Arc method was utilized. Work was not completed on this date and appears to meet the minimum requirements of the contract documents.

T1-2 Casting

The QA inspector observed the in process casting repair welding on Tower Saddle casting T1-2. The welding was performed where defects found during non-destructive testing were removed. The repair locations and repair details for this casting were submitted as Transmittal number 1652, revision 00. The JSW welding personnel Yoshio Kabutomori, ID 06-8000 continued the repair welding of repair numbers 1, 2, 3, 4 and 14. The repairs were performed utilizing Shielded Metal Arc Welding (SMAW) per the welding procedure specification (WPS) SJ 3026-4. JSW welding engineer Mr. Imai monitored the welding parameters and heat control at periodic intervals. The work was not completed on this date and appears to meet the minimum requirements of the welding procedure specification and contract documents.

The QA inspector observed the in process casting repair welding on Tower Saddle casting T1-2. The welding was performed to build up the thickness of the ribs in areas that were found to not meet the minimum thickness as shown on the approved drawings. The repair locations and repair details for this casting were submitted as number 000943, revision 03. The JSW welding personnel Fujii Mitshunori, ID 06-8004 continued the repair welding of repair 2-2 as shown on section B-B. The repairs were performed utilizing Shielded Metal Arc Welding (SMAW) per the welding procedure specification (WPS) SJ 3026-4. JSW welding engineer Mr. Imai monitored the welding parameters and heat control at periodic intervals. The work was not completed on this date and appears to meet the minimum requirements of the welding procedure specification and contract documents.

T1-3 Casting

No work performed on this date.

The following digital photographs illustrate observations of the activities being performed.



Summary of Conversations:

No relevant conversations.

Comments

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This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Venkatesh Iyer, (858) 967-6363, who represents the Office of Structural Materials for your project.

Inspected By:	Lanz,Joe	Quality Assurance Inspector
Reviewed By:	Brasel,Ron	QA Reviewer
